APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,211	07/18/2003	Matthew Englehart	MWS-055	4008

959   7590   01/25/2007
LAHIVE & COCKFIELD, LLP
ONE POST OFFICE SQUARE
BOSTON, MA 02109-2127

EXAMINER
JACOB, MARY C

ART UNIT	PAPER NUMBER
2123	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/622,211	ENGLEHART ET AL.
	Examiner	Art Unit	
	Mary C. Jacob	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 December 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-38</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-14 and 19-38</u> is/are rejected.

7)☒ Claim(s) <u>15-18</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 December 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   The response filed on 12/5/06 has been received and considered. Claims 1-38

are presented for examination.

Drawings

2.   The objections to the drawings are hereby withdrawn in light of the amendments

to the drawings and specification, filed 12/5/06.

Specification

3.   The objections to the specification are hereby withdrawn in light of the

amendments to the drawings and specification, filed 12/5/06.

Claim Objections

4.   Claims 15-18 are objected to because of the following informalities. Appropriate

correction is required.

5.   The preambles of Claims 15 and 17 both recite "an electronic device" and "a

device readable medium" followed by "the method". While the claim limitations appear

to be directed toward "a method", it is still unclear whether the Applicant intends to claim

the "method" or the "electronic device"/"device readable medium". If Applicant intends to

claim the "device"/"medium", there are no hardware elements recited in the claim

limitations that would be necessary to support the claim. It is requested that Applicant

clarify the claim language so that it is clear whether the "method" is being claimed or the "device"/"medium".

6.   The objections to the claims that appeared on the Office Action, mailed 9/5/06, and not repeated above are hereby withdrawn in light of the amendments to the claims, filed 12/5/06.

Claim Rejections - 35 USC § 112

7.   The rejections of Claims 1-3 and 19-21 under 35 U.S.C. 112, second paragraph, are hereby withdrawn in light of the amendments to the claims, filed 12/5/06.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   Claims 1-14, 19-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-14 recite a manipulation of abstract ideas and produce no concrete, useful or tangible result. Claims 19-32 are directed to non-functional descriptive material since the claims recite a manipulation of abstract ideas and produce no concrete, useful or tangible result.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11.   Claims 1-3, 19-21, 33-38 are rejected under 35 U.S.C. 102(b) as being

anticipated by The Mathworks, Inc., ("Real Time Workshop For Use With Simulink",

User's Guide, Version 3, January 1999, pages xviii, 1-3-1-5, 1-12, 3-1-3-6, 3-19, 6-1-6-

38, 7-1-7-18, 12-18-12-19), herein referred to as Mathworks.

12.   As to Claims 1 and 19, Mathworks teaches: in an electronic device that provides

a block diagram environment (page 7-2), a method comprising the steps of,

instructing a first function to invoke a portion of a first block from the block

diagram executing at a first rate (page 6-6, "ModelOutputs", "ModelUpdate", tid = 0;

page 7-9, last paragraph); and

instructing a second function to invoke a portion of a second block from the block

diagram executing at a second rate (page 6-6, "ModelOutputs", "ModelUpdate", tid = 1;

page 7-9, last paragraph), wherein each of said functions unconditionally define an

execution path for each of the rates (page 6-7, last paragraph; page 7-9, last

paragraph).

13.   As to Claims 2 and 20, Mathworks teaches: the step of instructing a third function

to invoke another portion of the first block from the block diagram executing at the first

rate, wherein the third function relates to the first function and the third function implicitly

corresponds to a subsystem of the first block (page 7-5, "Executing Multitasking Models", paragraph 1).

14.   As to Claims 3 and 21, Mathworks teaches: wherein the first and second functions are associated with an argument list having selected arguments necessary for invoking the first and second function, respectively (page 6-6-6-7, "tid" and description).

15.   As to Claim 33, Mathworks teaches: an electronic device for use in practicing a technical computing environment, the technical computing environment for developing and performing engineering and scientific related functions, the electronic device comprising,

an input device for use by a user (page xviii, paragraph 2);

a block diagram environment providing a block diagram model having a first block operating at a first rate and a second block operating at a second rate (page 7-2; page 7-5, "Executing Multitasking Models", paragraph 1); and

a code generation tool for generating code from the block diagram model, the code including one function for the first rate and one function for the second rate, wherein when instructed the first function invokes an operation operating at the first rate and the second function invokes an operation operating at the second rate (page 1-4, "The Generated Code"; pages 6-6-6-7; page 7-5, "Executing Multitasking Models", paragraph 1, "Multitasking and Pseudomultitasking", paragraph 1).

16.   As to Claim 34, Mathworks teaches: wherein the first function and the second function implicitly invoke the operation operating at the first rate and implicitly invoke the operation operating at the second rate, respectively (pages 6-6, 6-7, last paragraph,

"tid"; page 7-5, "Executing Multitasking Models", paragraph 1, "Multitasking and Pseudomultitasking", paragraph 1).

17.   As to Claim 35, Mathworks teaches: wherein the code generation tool is configured to group code for the first and second function (page 7-5, "Executing Multitasking Models", paragraph 1, "Multitasking and Pseudomultitasking", paragraph 1).

18.   As to Claim 36, Mathworks teaches: wherein the grouping of the code comprises sets of code statements free of logical predicates (page 7-5, "Executing Multitasking Models", paragraph 1).

19.   As to Claim 37, Mathworks teaches: wherein a first set of code statements corresponds to the first rate and a second set of code statements corresponds to the second rate (page 7-5, "Executing Multitasking Models", paragraph 1, "Multitasking and Pseudomultitasking", paragraph 1; page 6-6, "tid = 0", "tid" = 1).

20.   As to Claim 38, Mathworks teaches: an interface responsive to inputs from the user to communicate with the code generation tool to generate code from the block diagram model (page 3-5; page 3-6, paragraphs 1 and 2).

Allowable Subject Matter

21.   Claims 4-18, 22-32 are allowed.

22.   As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP §.707.07(a).

Response to Arguments

Rejections Under 35 U.S.C. 101

23.   Applicant's arguments filed 12/5/06 with regard to Claims 1-14, 19-32 have been fully considered but they are not persuasive.

24.   Applicant argues that Claims 1-14 fall into within the statutory of a "new and useful process".

25.   The preambles of the Claims 1-14 recite both "a method" and "an electronic device". Due to this, it is unclear as to whether Applicant is actually claiming the "method" or the "electronic device", and therefore, whether the claims fall into the statutory category of "process" or "manufacture". If Applicant intends to claim "an electronic device", it is noted that there are no actual hardware elements recited.

26.   Applicant argues that Claims 19-32 are directed to a "manufacture".

27.   The preambles of Claims 19-32 recite both a "medium" and a "method". Due to this, it is unclear as to whether Applicant is actually claiming the "medium" or the "method", and therefore, whether the claims fall into the statutory category of "manufacture" or "method". If Applicant intends to claim the "medium", it is noted that there are no actual hardware elements recited.

28.   As to the arguments regarding Claims 1-14, 19-32 producing no "concrete, useful or tangible result", Claims 1 and 19 are directed to instructing functions to invoke portions of a block diagram, Claims 4 and 22 are directed to generating sets of functions, Claims 7 and 25 are directed to grouping code into a plurality of functions and

Claims 12 and 30 are directed to separating generated code and associating each set

of code statements with a corresponding block. The recitation of instructing functions to

invoke portions of a block diagram in Claims 1 and 19 is not considered a concrete,

useful or tangible result because there is no result produced from the invoking of the

functions that is generated and stored or applied to a real world application. Claim 4, 7,

22 and 25 generate functions and code, but the generated functions and code are not

output, stored, displayed and therefore, not applied to a real world application, they

appear to stay embedded within the electronic device. The separation of code and the

"associating" of code statements in Claims 12 and 30 is not considered a concrete,

useful or tangible result since there is no actual, real-world result produced that is stored

or applied to a real world application, and the code statements appear to remain

embedded within the electronic device.

Rejections Under 35 U.S.C. 102(b)

29.   Applicant's arguments filed 12/5/06 with regard to Claims 1-3, 19-21, 33-38 have

been fully considered but they are not persuasive.

30.   As to Claims 1 and 19, Applicant argues, "RTW does not disclose "instructing a

first function to invoke a portion of a first block from a block diagram executing at a first

rate and instructing a second function to invoke a portion of a second block from the

block diagram executing at a second rate, wherein each of said functions

unconditionally define an execution path for each of the rates"" (page 21). As to Claims

33-38, Applicant argues, "RTW does not disclose "a code generation tool for generating

code from the block diagram model, the code including one function for the first rate and one function for the second rate" (page 26).

31.   As to these argument, Mathworks discloses two functions, "ModelOutputs" and "ModelUpdate" (page 6-6), wherein the first function, "ModelOutputs" is instructed through the running of the code, to invoke a portion of a first block from a block diagram executing at a first rate (invoking those portions of the block with the associated tid=0), and wherein the second function, "ModelUpdate" is instructed through the running of the code, to invoke a portion of a second block from the block diagram executing at a second rate (invoking those portions of the block with the associated tid=1). The functions unconditionally define an execution path for each of the rates wherein the function will execute the blocks that are associated with the task identifier (tid) in the iteration of the code (the function calls where tid=i) (pages 6-6-6-7). Mathworks also discloses the generation of code (page 1-4, "The Generation of Code") wherein it is taught that Simulink blocks are automatically converted to code and Real-Time Workshop includes target files that are compiled to produce C code.

32.   Applicant's arguments, filed 12/5/06, with respect to Claims 4-18, 22-32 have been fully considered and are persuasive. The rejections of Claims 4-18, 22-32 under 35 U.S.C. 102(b) have been withdrawn.

Conclusion

33.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

34.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner

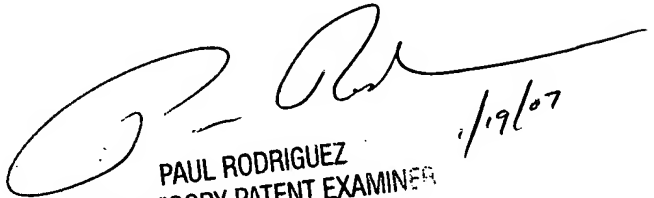can normally be reached on M-F 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary C. Jacob
Examiner
AU2123

MCJ
1/19/06

PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100